

**ARMED FORCES REPOSITORY OF SPECIMEN SAMPLES  
FOR THE IDENTIFICATION OF REMAINS**

**DNA SPECIMEN COLLECTION INSTRUCTIONS**

**1. Purpose**

The following DNA collection instructions are designed to give specific directions to installations/sites on the collection and shipment of DNA reference specimens. Questions concerning collections procedures and supply orders/reorders should be directed to the Armed Forces Repository of Specimen Samples for the Identification of Remains (AFRSSIR) at commercial telephone number (301) 319-0366 or DSN 285-0366, facsimile (301) 319-0369, or email at AFRSSIR@afip.osd.mil.

**2. Collection Supplies**

a. A DNA specimen collection kit consists of a bloodstain card, single nylon shipping pouch with tape, and a desiccant packet. In addition, shipped with the collection kits are self-addressed mailing envelopes and drying racks. Available upon request are fingerstick devices, alcohol swabs, and pencils. Collection supplies are available individually packaged or in bulk quantities for collection ease.

b. All unique collection supplies used in collecting DNA reference specimens must either be provided by the AFRSSIR or approved by the AFRSSIR before use in the DNA collection procedure. Specific requirements in fiber composition of the bloodstain card preclude the use of any substitutes.

c. Supply orders are executed by the AFRSSIR contract ordering officer. Supply requests are normally filled within 15 days of the order being placed. If an order has not been received within 30 days, contact the ordering officer for assistance

**3. Collection Procedures**

a. For personal safety, and to prevent contamination of the DNA reference specimen, collection personnel should wear clean non-powdered gloves at all times when collecting and handling specimens.

**b. Bloodstain Card Data Information (Figure 1)**

(1) The servicemember, deploying civilian or civilian contractor using a #2 pencil, or ball point pen (do not use felt tip or fountain pens) must complete all information in the requested format on the bloodstain card, and carefully blacken the appropriate mark sense blocks corresponding to the social security number (SSN) and branch of military service. The AFRSSIR requests that letters and numbers be made as close to the examples on the bloodstain card as possible. However, bloodstain cards should not be discarded if the individual cannot make the alpha/numeric characters as depicted. As a general rule if collection personnel can read and decipher the individual's name, SSN, date of birth, collection date, and branch of military service, then it can be assumed that the AFRSSIR personnel can do the same. If collection personnel cannot decipher the individual's writing, then the bloodstain card should be discarded and completed again.

(2) Have the specimen donor sign the card in either number 2 pencil or ball point pen (do not use felt tip or fountain pens). Ensure that the signature corresponds to the name the individual places on the front of the bloodstain card.

(3) Verify that all information is correct and complete on the bloodstain card using either a personnel roster or the individual's identification card. If the SSN on the donor's bloodstain card does not match the SSN on the donor's military identification card, the specimen will not be successfully accessioned into the AFRSSIR database.

(4) Reserve and Guard servicemembers must list their branch of service as USA, USMC, USN, or USAF. Do not select the title "Other".

c. Blood Specimen Collection – Bloodstain specimen cards should be stained in the presence of the donor.

Note: When collecting blood on the bloodstain card ensure that you do not cross contaminate the card with blood from another individual. This will interfere with the DNA identification process. Ensure that all work surface areas, gloves and other supplies are clean and free of blood and/or body fluids before proceeding with another collection.

(1) Fingertick Method:

Place the bloodstain card so that the filter paper side containing the printed circles is facing up. Before any fingertick is attempted, ensure that the area to be pricked on the individual's finger is cleansed thoroughly with an alcohol swab. Prick any finger except the right index finger, using the fingertick device provided in the collection supplies. Each fingertick device is designed to be used only once for safety purposes. Extra fingertick devices will be furnished to ensure that collection personnel have enough devices on hand to complete the collection. Squeeze the pricked finger to produce droplets of blood. Touch the blood droplets to the appropriate circled areas of the bloodstain card so that the circled areas are at least half covered with blood. If more than one fingertick is necessary, use a different finger for each stick until both circles are at least 50% covered with blood.

(2) Venipuncture Method:

(a) Prior to venipuncture, ensure that the vacutainer tube contains the name and SSN identifiers specific to the servicemember, deploying civilian or contractor who is providing the blood specimen. Using standard sterile venipuncture techniques, draw the blood into a purple top vacutainer tube which contains only EDTA. No other type of vacutainer shall be used. The AFRSSIR offers a 6" x 8" transfer pouch that can be used to keep an individual's bloodstain card and vacutainer of blood together. The use of this pouch will facilitate keeping a servicemember's collection material together until it can be spotted. Do not send vials of whole blood with unspotted specimen cards to the AFRSSIR. The specimen card must be spotted with blood prior to submission to the AFRSSIR. After spotting the specimen card, discard the tube/blood draw instruments in accordance with standard universal precautions concerning biohazard waste.

(b) To transfer blood from the vacutainer tube, place the bloodstain card with the filter paper side containing the printed circles face up. Ensure that name and SSN on vacutainer tube matches the donor card. Taking precautions to prevent splatter or surface contamination, remove the top of the vacutainer. For personal protection, if available, laboratory blood spatter shields should be used. Using a standard plastic disposable transfer pipette, place four drops of blood in the center of each circled area on the bloodstain card. Allow the blood to migrate throughout the circle to completely fill the circled area. If required, additional blood droplets may be applied to fill the circle. It is acceptable to have blood outside the designated circles. Once the blood transfer is completed, dispose of the remaining blood, vacutainer, and pipette in an approved biohazard container. Do not reuse the plastic transfer pipette.

(3) Drying the Bloodstain Card: After affixing the blood to the bloodstain card, allow the blood to dry using the drying racks furnished by the AFRSSIR.

Note: Do not stack the bloodstain cards or touch the bloodstained areas of the card while transferring the cards to the drying racks. Ensure that gloves and all surface areas of the drying rack are clean and free of blood or other body fluids. While placing the cards onto the drying rack, ensure that the wet bloodstained ends do not come into contact with other cards. This can be

accomplished by alternating the bloodstained end of the card on the left and right sides of the drying rack.

d. Specimen Kit Reassemble

(1) Once the bloodstain card has dried, remove one of the bar code labels from the bloodstain card of the individual, and place it in the appropriate block on the side of the bloodstain card that contains the blood pad circles.

Note: To prevent bacterial growth, do not seal the bloodstain card in the plastic shipping pouch until it has dried completely. A minimum of 20 minutes is required. One hour is more than sufficient.

(2) The remaining bar code labels left on the bloodstain card can be used to identify the vacutainer tube of blood or the 6" x 8" transfer pouch. It does not matter which alpha character (A – C) is placed on the bloodstain card.

(3) Separate and discard the instructions and remaining unused bar codes from the bloodstain card by tearing along the perforation.

NOTE: If the filter paper containing the bloodstain is separated from the donor's identification portion of the card, the card is invalid and another specimen card must be completed. It is unacceptable to reattach the bloodstained filter paper to the card with tape, staples, or by any other means.

(4) Place the bloodstain card, with a desiccant packet, into the shipping pouch. Place the blood spotted end of the card into the pouch first. Bulging of the pouch should be avoided by reducing the amount of entrapped Excess air should be removed by gentle hand pressure over the pouch prior to sealing the pouch. Heat sealing of the pouch is preferable, and a heat sealer can be provided with collection supplies. If using a self-sealing pouch, seal the pouch by first folding the lip closure on the perforated line that is located approximately 1/4" from the opening of the pouch. Second, remove the tape from the lip of the pouch to expose the adhesive. Third, fold the lip of the pouch along the perforated line so that the adhesive adheres to itself. Press along the adhesive to ensure proper closure.

4. Shipment of Specimens to the AFRSSIR

a. Place the sealed shipping pouches in the mailing pouch (maximum of 75 specimens per pouch) furnished with the collection supplies. The use of other suitable mailing containers (i.e. cardboard boxes) is permitted and encouraged. If using cardboard boxes it is not necessary to package the specimens in the mailing pouches; however, the box should be lined with a plastic bag. When ready for shipment, seal the box, and place the furnished address label on the box.

NOTE: Shipping box size should not exceed 16" x 16" x 18".

b. Before sealing, place a sheet of paper in the box or pouch with the following information:  
Point of Contact (individual responsible for specimen collection)  
POC Mailing Address  
POC Telephone and Fax Number (Commercial and DSN)

c. It is not necessary to provide a list of the donors with each shipment. The specimens can be mailed by US Postal Service or shipped by an express carrier. If shipment cannot be immediately accomplished, the shipping container should be stored in a cool, dry environment away from direct heat. Specimens should be mailed within 10 days of collection if stored under the above conditions. Mail to:

Armed Forces Repository of Specimen Samples for the Identification of Remains

16050 Industrial Drive, Suite 100  
Gaithersburg, MD 20877

5. Questions concerning these collection instructions and techniques described should be directed to the AFRSSIR, telephone # (301) 319-0366, DSN 285-0366.

Figure 1: Sample DNA Bloodstain Card

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